Time-Aware AI: Automated Time Series Analysis

Overview
Who doesn’t want a glimpse into the future? When done well, forecasting allows you to set the market strategy, outperform competitors, run more efficiently and effectively, or proactively address consumer demands. Yet, the reality is that due to tradeoffs in accuracy-informativeness, forecasts tend to include the correct answer less than 50% of the time*.

Forecasting for the Real World, not an Ideal World
DataRobot Time Series automates creating the world’s most sophisticated time series models enabling you to predict the future based on historical patterns and trends. It uses a combination of traditional and emerging techniques to help with forecasting at an unprecedented scale. It provides next-level forecasting for thousands of series with potentially millions of items in each series.

DataRobot’s Automated Time Series solution makes scalable, hyper-granular, accurate forecasting a reality. Through the power of automation and the assistance of an intuitive UI, you can access a full spectrum of machine learning and deep learning models, as well as an extensive bench of time-based data science techniques. Highly configurable for real-world use-cases, Automated Time Series can tackle multiple time-based AI scenarios such as conventional forecasting (i.e., future sales) and classification (i.e., the probability that an event occurs in the future, and anomaly detection). And because we automate the entire lifecycle, you can rest assured that you’re getting the most value from your forecasting models in production and that they’re behaving as expected.

“DataRobot has been a game changer for us. It provides our experienced data scientists with an efficient framework to develop and deploy superior models, and it empowers our less experienced practitioners with a short learning curve to advance capabilities. DataRobot consistently impresses us with not only its outstanding partnership and support, but also with the evolution of its platform.”
— Scott Crawford, Data Science Lead

Rapidly build, implement, manage, and monitor time-aware AI

Accelerating AI Impact with Time Series Automation

Empower your existing teams and talents with the automated solution and increase your time-aware AI throughput with human-friendly insights, built-in automated algorithms, advanced time-aware feature engineering, and adjustable backtesting.

Time Aware Start

DataRobot Time Series is time-aware AI. When you upload the data into the DataRobot product, it automatically detects if you have time-based information in your dataset. We offer a variety of time-based analyses - Forecasting, nowcasting, and OTV.

Advanced Time Series Strategies

We implemented a wide variety of advanced time series strategies depending on the data, the time horizons, and business needs. DataRobot will automatically apply advanced techniques, so you don’t have to know Time Series Data science or machine learning. You get to focus on the business problem.

Multi-Series Insights

Now you can forecast multiple items across time horizons once, even if they are not the same item. It is next-level forecasting for thousands of series with potentially millions of items in each series.

High Accuracy from Model Diversity

Use advanced algorithms, time series modeling, and sophisticated forecasts to proactively address and anticipate changing conditions, instead of reacting to unexpected developments.

Combined Traditional and Emerging Technologies

Beyond essential and proven time-series methods like ARIMA and Facebook Prophet, DataRobot includes advanced time series models that help you achieve even higher forecasting accuracy.

Trust and Insights Embedded into Sophisticated Forecasts

Build Time-Aware predictions that you can trust. Visual Aids help you navigate predictions, what those predictions look like over time, what aspects of your forecast are impacting your predictions.

Automated Backtesting

Built-in, automatic time-aware backtests. This is the time series equivalent of cross-validation with built-in time-sensitive guardrails. Testing based on time periods or durations instead of random rows achieves the highest possible accuracy and prevents unintentional model overfitting or cheating.

Ready for the Real World

DataRobot has heavily invested in adding features that help to solve complex problems and empower organizations during unprecedented times.

Calendar Feature

Add known dates and events into your Time Series forecast - holidays, earning call dates, major events, marketing promotions, etc.

Customized Confidence Intervals

Set the variance you’re willing to accept in a forecast. You can ensure your forecast meets your business sensitivities.

Automatically Quantify Forecast Stability

Understand if or when a model performance may be changing over time with automated model monitoring.

Inject Time-Aware AI into Your Existing Systems and Processes

Use automated and containerized API deployments to scale your AI across an organization.

Contact Us

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“DataRobot Automated Time Series considers state-of-the-art approaches. I wasn’t taught how to estimate XGBoost, Elastic Nets or Eureqa models. I certainly wouldn’t be able to run these myself. I wouldn’t know which one of many approaches would work best...whereas DataRobot tries them all and dives deeper on the ones that show early promise.”

— Fortune 15 Global Bank